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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,862	05/23/2001	Timothy E. Percy	12784.2US01	2070

23552 7590 08/30/2005

MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

LU, JIPING

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/864,862	PEARCY ET AL.	
	Examiner	Art Unit	
	Jiping Lu	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,8,9,12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,8,9,12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed 8/8/2005 has been entered. Claims 5, 8-9, 12-13 are now pending in the application.
2. The indicated allowability of claim 9 is withdrawn in view of the newly discovered reference(s) to Rainbolt et al. (U. S. Pat. 6,524,633). The delay of citation of the new reference is regretted. Rejections based on the newly cited reference(s) follow.
3. The finality of the rejection of the last Office action is withdrawn in view of the newly discovered reference.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 9, 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copson (U. S. Pat. 2,859,534) in view of Levinson (U. S. Pat. 4,103,431) and Rainbolt et al. (U. S. Pat. 6,524,633).

Copson shows a method of lyophilizing material 13 comprising the steps of placing material to be processed in a chamber 10, creating a microwave field in the chamber, passing the water vapor through a condenser 18, stirring the microwave (via stirrer 10a) with a stirrer having arc inhibiting surfaces (See Fig. 1, left and right corner of 10a), and providing selected surfaces (at 14b) in the chamber with arc inhibiting surfaces. However, Copson does not teach the steps of

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controlling the microwave power and duration in response to the detected temperature and passing water vapor from the material being dried to or through a desiccant. Levinson teaches a product drying method of controlling microwave power and duration (by 1-3, 13) in response to the detected temperature by temperature sensor 11 same as claimed. Rainbolt et al teaches a product drying method with a step of passing water vapor from the material being dried to or through a desiccant (col. 8, lines 11-31, col. 9, lines 14-21) same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the method of Copson with a step of controlling the microwave power and duration in response to the detected temperature as taught by Levinson in order to improve the drying efficiency and to further modify the method of Copson to include a step of passing water vapor from the material being dried to or through a desiccant as taught by Rainbolt et al. in order to more efficiently remove the water vapor.

6. Claims 5, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copson (U. S. Pat. 2,859,534) in view of Levinson (U. S. Pat. 4,103,431) and Rainbolt et al. (U. S. Pat. 6,524,633) as applied to claim 9 above, and further in view of Takahashi (U. S. Pat. 4,764,102).

The drying method of Copson as modified by Levinson and Rainbolt et al. as above includes all that is recited in claims 5, 8 except for the step of shielding selected surfaces in the chamber from direct exposure to microwaves. Takahashi teaches a drying method with a step of shielding the selected surfaces (809) in the chamber (803) from direct exposure to microwaves (see Fig. 26) same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further provide the method of Copson with a

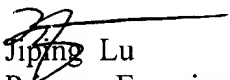
step of shielding the selected surfaces in the chamber from direct exposure to microwaves as taught by Takahashi in order to obtain the uniform drying.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571 272-4877. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jiping Lu
Primary Examiner
Art Unit 3749

J. L.